APPENDIX C

attach #10

PATENT

IN THE EUROPEAN PATENT OFFICE

Applicant	:	Berman et al.
European Patent No.	:	0 139 417
Priority Filing Date:		August 30, 1983
For	:	VACCINES BASED ON MEMBRANE BOUND PROTEINS AND PROCESS FOR MAKING THEM

DECLARATION OF JOHN K. ROSE IN SUPPORT OF REPLY TO OPPOSITION BY CHIRON CORPORATION

I, John K. Rose, do declare as follows:

1. I am a citizen of the United States and resident of the State of Connecticut.

2. I received a B.A. with honors in Biology from Brandeis University in Waltham, Massachussetts in 1969, and I received a Ph.D., granted with distinction, in Biology and Biochemical Genetics from Stanford University in Stanford, California in 1973.

3. I have been a professor of Pathology and Cell Biology at the Yale University School of Medicine since 1986. I have been an editor of the journal, Virology, since 1988.

4. The intracellular transport of viral membrane proteins is a primary research interest of mine, and I have authored several journal articles on this subject, including the article printed in Cell 30:753-762 (1982), which I understand was cited by Chiron

EXHIBIT A

Corporation (as Reference J) in their opposition proceedings against the Genentech patent directed to herpes simplex virus vaccines in the European Patent Office.

5. In addition to the journal articles mentioned above, I have published extensively on my research, and I attach as an appendix a list of these publications.

6. I am generally familiar with the subject matter of the above mentioned Genentech patent, European Patent B-0 139 417, and with the work of Laurence Lasky and Phillip Berman relating thereto. I am also familiar with the work reported in the references cited by the opponents, and specifically with the work of Gething and Sambrook, reported in Nature 300:598-603 (1982) (Reference H); the work of Sveda et al, reported in Cell 30:649-656 (1982) (Reference I); and the work of Cohen et al. reported at the Eighth International Herpes virus Workshop, Oxford (July 31, 1983) (Reference L) and at the International Workshop on Herpes viruses in Bologna (1981) (Reference M).

7. To my knowledge, the Genentech researchers, Berman and Lasky, were the first to produce a successful vaccine based essentially on a truncated, membrane-free derivative of a polypeptide expressed from a eukaryotic cell line stably transfected with encoding DNA. In this regard, these researchers used as their model, DNA encoding a truncated, membrane-free glycoprotein D polypeptide of herpes simplex virus to produce a vaccine that successfully raises neutralizing (protective) antibodies against <u>in vivo</u> challenge by a viral pathogen. This subject matter constitutes the scope of the cited European Patent

139,417 as well as their counterpart, scientific publications: Lasky, et al., Bio/Technology 2, 527 (1984) and Berman, et al., Science 227, 1490 (1985).

8. Based on my knowledge of the state of the art at the time the invention was first disclosed (August 1983), one of ordinary skill in the art could not have predicted that a successful vaccine that raises neutralizing (protective) antibodies against in vivo challenge by a pathogen could have been produced based essentially on a truncated, membrane-free derivative of a membrane-bound glycoprotein of the virus, produced as an expression product in a eukaryotic cell line stably transfected with encoding DNA.

9. Based upon this pioneering demonstration with the herpes simplex vaccine model, their results provide a reasonable expectation that the system would be successful with other viral pathogens.

10. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, and that willful, false statements may jeopardize the validity of the patent.

Dated: 12/14/90

John K. Rose

DEA-6039
121390

CURRICULUM VITAE

Name: John Kenneth Rose

Date of Birth: July 21, 1947

Place of Birth: Northampton, Massachusetts

Citizenship: U.S. Soc. Sec. No. 433-68-1751

Education:

1965-1969	Brandeis University, Waltham, Massachusetts. B.A. with honors in Biology
1969-1973	Stanford University, Stanford, California Ph.D. (granted with distinction) in Biology and Biochemical Genetics

Positions held:

1969-1973	Predoctoral trainee of the U.S. Public Health Service with Dr. Charles Yanofsky, Stanford University
1974-1975	Postdoctoral Fellow, Massachusetts Institute of Technology in the laboratories of Drs. David Baltimore and Harvey Lodish
1976-1978	Research Associate, Massachusetts Institute of Technology with Dr. David Baltimore
1979-1982	Assistant Professor, The Salk Institute
1982-1986	Associate Professor, The Salk Institute
1986-present	Professor of Pathology and Cell Biology Yale University School of Medicine
1988-present	Editor of VIROLOGY

Research Interests:

Intracellular transport of viral and cellular membrane proteins. Assembly of enveloped viruses. Regulation of viral gene expression.

Publications:

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